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ABSTRACT

An evaluation was conducted of the Harrisburg (Pennsylvania) Experience-Based Career Education (EBCE) program at the end of its second year of implementation. Evaluation data were collected in the following ways: regular meetings with project staff; on-site observations of program activities; results from pre and posttesting students; inspection of a sample of learning activities; interviews with students; telephone survey of parents; conversations with resource persons at experience sites; employer questionnaires; inspection of attendance records of students; inspection of records of counselor/learning site specialist; and planning session with consultants and EBCE staff. Evaluation data indicated that EBCE students did as well as students with similar abilities in the regular high school program. EBCE students showed improved attitudes toward work and recognized the importance of learning marketable skills. EBCE students learned tasks performed by people in various occupations and had an opportunity to explore several different occupations. In addition, EBCE students showed better work habits in school and their attendance improved. Overall reactions by parents, employers, and students were favorable. Recommendations were made to improve the development of sequenced learning activities and coordination of the learning activities with experience site activities. (BM)

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ERANDA

CE 018 700

SECOND YEAR EVALUATION OF HARRISBURG CITY SCHOOL DISTRICT'S EXPERIENCE-BASED CAREER EDUCATION PROGRAM

Submitted to: Mr. Gerald Steger
Project Director

July 10, 1979

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I. Introduction

This is an evaluation of the second year of the Harrisburg City School District's Experience-Based Career Education (EBCE) Program. This report will address the objectives contained in the evaluation design component submitted by Harrisburg City Schools in its proposal to the U. S. Office of Education. The primary concern will be the degree to which the objectives have been achieved.

In addition to the written reports submitted to the Project Director, Mr. Gerald Steger, the evaluators have had regular oral interchange with the Project Director, EBCE staff and Dr. Joan Beers, Director of Research and Evaluation. These oral reports are designed to keep the Project Director and EBCE staff abreast of the evaluator's activities. This formative evaluation process provided feedback and information which was used to obtain in-service training for the learning coordinators and led to some changes in the learning activities being given to students. The Project Director and staff carefully listened to information which we supplied from observations and they acted upon many of our suggestions.

This report has been prepared after a thorough examination of the objectives utilizing information gained in the following ways:

1. Regular meetings with the Project Director and EBCE staff.
2. On-site observations of Program activities.
3. Results from pre and posttesting of students in the program.

4. Inspection of Learning Activities of a sample of students.

5. Interviews with students.

6. Telephone survey of parents of students in the program.

7. Conversations with resource persons at experience sites.

8. Results from employer questionnaires.

9. Inspection of attendance records of students.

10. Inspection of records of Counselor/Learning Site Specialist.

11. Planning session with AEL consultants and EBCE staff.

II. General Comments

The Harrisburg City School District's EBCE program got off to a slow start in this its second year of operation. After identifying and selecting 60 students for the EBCE program in the Spring of 1977, the program was delayed in its implementation when the letter of program approval was not forthcoming from the USOE prior to the school year's beginning. The district chose not to allow the program to begin functioning until the letter was received. When school opened, many of the students who had indicated that they would participate decided to enter other programs instead. When the letter of approval was received, the EBCE staff was faced with the problem of recruiting students once again. In order to meet minimal numbers, they recruited many who were marginal students. During the course of the year, 69 students were enrolled at one time or another in the program. At the end of the year, 42 remained in the program.

Through all these difficulties, there were obvious gains and improvements made in the program. Learning activities were improved in many areas. Sex bias counseling sessions were carried out in an organized fashion. The students were courteous and the program was well supervised by EBCE staff members.

TABLE I

RESULTS OF ANALYSIS OF LEARNING ACTIVITIES
TO DETERMINE MODE OF ACTIVITY, DEGREE OF INTEGRATION
AND USE OF EXTERNAL SOURCES

Learning Activity	Total
Reading	269
Writing	479
Library Research	113
Worksheets and Text Questions	355
Drawings/Puzzles/Maps/Charts	122
Definitions	120
Judgements/Observations	65
Interview	62
Oral Report	7
Application/Form completion	10
Sex Stereotype	2
Soil Collection/Soil Testing	1

	One Subject	Two Subjects	Three or More Subjects
Integrated Activities	551 - 63%	287 - 32.8%	37 - 4.2%
Evidence of Site Coordination	27 - 3.1%		
Use of Resource Person	101 - 11.5%		
Use of Parents and Others	58 6.6%		

TABLE II

RESPONSES OF EBCE STUDENTS TO INTERVIEW SCHEDULE

1. Who develops learning activities for you?

   Learning Coordinator 42

2. Do you discuss learning activities with the Learning Coordinator after they have been completed?

   Yes 36 No 2 Sometimes 4

3. Did you understand what you were to accomplish, etc?

   Yes 41 No 0 Sometimes 1

4. Do you think the learning activities were meaningful?

   Yes 29 No 7 Sometimes 6

5. Were the learning activities tailored to your needs and goals?

   Yes 25 No 9 Sometimes 8

6. Was the amount of time spent on learning activities adequate?

   Yes 39 No 3

7. How often did you have group counseling?

   None 7 2 or 3 times 15 More than 3 times 20

8. Were they of value to you?

   Yes 36 No 6

9. How would you rate the sex bias and sex role stereotyping sessions?

   Very good 7 Good 23 Fair 11 Poor 1 Very poor 0

10. Do you think sex should be a factor in obtaining a job or in being promoted?

    Yes 1 No 36 Don't know 3 Depends 2

11. What kinds of problems could develop when a man takes a position that was formerly considered a woman's job or a woman takes a position that was formerly considered a man's job?

    Problems with fellow workers 24 Peer acceptance 6 None 5
    May not be able to physically do the job 3 Don't know 2
    May not have same opportunities 1 Depends on type of job 1

TABLE II (continued)

12. Did you seek any personal counseling?

Yes 26 No 16

Once 2 Two or three times 7 More than three times 17

13. Was personal counseling helpful?

Yes 26 No 0

14. How many employer sites have you attended?

One 1 Two 8 Three 10 Four 10

Five 8 Six 3 More than six 1

15. Were you satisfied with the number of sites available?

Yes 37 No 5

16. Were you satisfied with the type of sites available?

Yes 29 No 13

17. How would you rate the effectiveness of the EBCE programs in the following areas using a scale of 1 to 5 with 1 being "Very Poor" and 5 being "Very Good."

	1	2	3	4	5	Mean
Learning basic academic skills		4	9	24	5	3.71
Learning good work habits			6	17	19	4.3
Learning to be aware of more career opportunities		1	5	11	25	4.43
Learning to work with others		1	7	19	15	4.14
Learning to have a positive attitude toward work			3	18	21	4.43
Learning to assume responsibility for yourself		1	5	10	26	4.45
Learning to make decisions and follow through on them			11	18	13	4.05
Learning to communicate with others in a mature way			2	19	21	4.45
Developing a positive attitude toward yourself			5	20	17	4.29
Learning to think through and solve problems			11	18	13	4.05
Improving your interpersonal and social skills			10	16	16	4.14

18. How would you compare the EBCE learning environment (program) with your experience at John Harris?

Better 33* Same 5 Worse 4

*Three students tempered this by saying the academic program at Harris was better, but the EBCE program was better overall.

TABLE II (Continued)

19. Do you think this program helped you to develop an understanding of your interests and capabilities?

Yes 40 No 2

20. To what degree were you satisfied with the EBCE program?

Very satisfied 12 Satisfied 21 Neutral 7 Dissatisfied 1
Very dissatisfied 1

21. How important would you say it is to develop marketable skills?

Very important 32 Important 7 Neutral 3 Unimportant 0
Very unimportant 0

22. What kinds of job sites were you in? What kinds of tasks do these jobs require and what are the qualifications for the job?

Appropriate response 29 Some appropriate and some not 12
Inappropriate 1

23. What are your future plans and how would you go about securing training for skills needed?

Appropriate response 39 Inappropriate response 3

24. For seniors only: Do you have a job?

Yes 5 No 6 Maybe 4

As they did last year, all students responded immediately with their Learning Coordinator's name. Many students indicated that they had developed their own activities, others indicated they worked with the Learning Coordinator in developing their learning activities and still others gave only the Learning Coordinator's name. The criterion for this objective was that 85 percent of the students would indicate a program totally guided and coordinated by one staff member and 100 percent indicated that this was the case. ERANDA observations of the teaching/learning environment and inspection of the learning activities during the 1977-78 academic year confirmed that students were having their activities coordinated and guided by their Learning Coordinator almost exclusively. The criterion for objective 3 was met.

Objective 4: Each EBCE student will have access to a professional guidance and counseling staff member.

Mr. Gary Study was the professional counselor available to the students. He conducted group counseling sessions, and he was available for personal and vocational counseling. When the students were asked how often they had group counseling sessions, the responses varied (see Question 7, Table II). The modal response was more than 3 times, while 7 indicated that they had none other than the sex-role stereotyping and sex bias counseling sessions. Fifteen indicated once and 6 indicated 2 or 3 times. A partial explanation of this result is the fact that students often did not know the sessions were for counseling purposes. While Mr. Study attempted to provide group counseling sessions particularly early in the year, it was not always possible to do so. As the Employer Site Analyst, he was out of the office frequently and he also spent time in preparation for the sex-role stereotyping and sex bias counseling sessions. After instituting the counseling sessions on sex-role stereotyping and sex bias, there were few group counseling sessions. Normal school interruptions also reduced the amount of time available for group counseling with students. When they were asked whether or not the group counseling sessions were of value to them (Question 8), 29 said "yes" and 6 said "no." They indicated that it was helpful learning about other employer sites and talking about problems encountered by others at these sites in "rap" sessions. Ten students indicated that they were helpful in career counseling, four said they were helpful in developing future plans, two said in understanding ways of life, three said in understanding sex roles and two indicated they were helpful in making plans for college. When the students were asked if they sought any personal counseling, 26 said "yes" and 16 said "no." (Question 12). The modal response when asked how often they met with Mr. Study

for personal counseling was more than 3 times (17 indicated this). Seven others said 2 or 3 times and 2 said once. All 26 who sought personal counseling said that it was helpful (Question 13).

The criterion for this objective was 85 percent of the students would have access to a professional guidance and counseling staff member. One hundred percent of the students had access and attended some group or individual sessions. The criterion for objective 4 was exceeded.

Objective 5: Each EBCE student has a sequence of learning activities in a variety of modes, tailored to her/his individual goals, needs, abilities and interests.

Learning Activity Sheets were examined by ERANDA and as indicated in Table I a variety of modes were utilized in meeting the needs of students. Over 50 percent required the writing of a report, a paragraph, or a letter, while slightly over 40 percent used worksheets and/or textbook questions to be answered. Over 30 percent included a reading assignment including book reports, reading a chapter, etc. Others required drawings, puzzles, maps, charts, pictures (over 25 percent), while still others required students to observe, make judgments, conduct interviews, give oral reports, complete application forms and the like. About one-fifth of the learning activities made use of the resource person, the parents or other members of the community. There was not always an apparent sequence to the learning activities in the files. Many of the learning activities seemed isolated and unrelated to the other learning activities within the given subject matter area. The Learning Coordinators, however, are developing competencies and sequenced activities in all subject matter areas for next year.

When students were asked if they thought the learning activities were meaningful, 29 said that they were, 6 others indicated that they sometimes were and

7 said that they weren't meaningful (Table II, Question 4). Twenty-five said that learning activities were tailored to their needs and goals, eight said "sometimes they were tailored to their needs" and 9 said "that they weren't tailored to their needs at all" (Question 5).

Objective 5 was partially met. The learning activities were in a variety of modes, they were meaningful for the most part, but they were not always tailored to the needs, abilities, interests and goals of the students, at least in the eyes of some students and they were not always in sequence.

Objective 6: Each EBCE student will have access to a variety of employer sites commensurate with her/his career, academic and personal needs and interests.

Students were interviewed during the first week of June. When the students were asked how many employer sites they had attended, the responses ranged from 1 to 10. The most frequent response was 3 and 4. Table II, Question 14, shows that 8 had attended two sites, 8 had attended five sites, 3 attended six sites, while 1 attended one site and 1 other attended ten sites. All but 5 of the students indicated that they were satisfied with the number of sites available (Question 15), while 13 indicated that they were not satisfied with the types of sites available. The criterion for objective 6 was 85 percent of the students indicating access to a variety of employer sites commensurate with their career, academic and personal needs and interests and this was not met. The criterion may not be reasonable for this objective, however. Students coming into the program in some cases have unrealistic expectations for what the EBCE program can do. Of the thirteen who indicated that they were not satisfied with the type of experience sites available, five of the areas could be offered by the EBCE program without difficulty. Others required extensive training and in the actual work situation it is inconceivable that the student could do anything other than observe.

Objective 7: All EBCE learning procedures, goals and resources are integrated into a simple, coordinated instructional system.

As indicated previously the Learning Coordinators, for the most part, follow the AEL model. While they attempt to achieve the above goal, it is not always easy to accomplish. They are making progress toward this goal and have begun to develop competencies within subject matter areas which are logically sequenced. It is still a goal yet to be achieved, however. While some learning activities do attempt to integrate into a simple, coordinated instructional system, (such as mathematics) others do not accomplish this goal yet. There also, by admission of the Learning Coordinators and from employer responses was a lack of coordination with the resource persons at the site in some instances.

Learning Coordinators did not maintain personal contact with all resource persons and learning activities did not always take advantage of the resources available at the site. This problem was recognized and AEL has provided some in-service assistance in this area and they will continue to assist the Learning Coordinators in developing learning activities which utilize resources at the site. This objective was partially achieved, but the foundation has been established for achievement of this objective during the third year.

Objective 8: Effective learning will occur during a student's employer site activities through such mechanisms as preplanning. site analysis, preparation, clear specification of objectives, supervision, etc.

A questionnaire was mailed to each of the 65 employers currently on the Experience Site list. Forty questionnaires were returned, but seven of these indicated that they had no students this year. Table III gives the responses of the resource persons completing the questionnaire. Thirty of the 33

respondents indicated that EBCE staff provided them with information which helped them direct students' activities at the site. Twenty-one indicated that students showed the resource person their activity sheets, while 7 said they didn't and 5 said they sometimes did. EBCE staff explained the reason for placement in 28 cases, but only 15 said they received feedback on student's progress (12 others said they sometimes received feedback). Supervision of students was a major job of the resource person on site (item 5). The resource person also plans the activities for students on site.

One problem area noted here was the fact that students in our observations and interviews felt that the Experience Site Analysis sheets were out of date. They did not always prepare them for what they were to do on site. Another problem in this regard is that the resource person frequently has never seen this document. The student is often turned over to a resource person with no explicit instructions as to what is his/her responsibility to the student. While the EBCE staff have prepared excellent descriptions of the role of the resource person, they may never have seen them. There very often is not a clear specification of what the student is to accomplish while on site.

Among the comments given by resource persons (see Table III) were short duration, students were in placement too long, not enough time to devote to the individual and learning activities are not related to what the student is doing on site. These comments tend to confirm that this is still an area of weakness within the EBCE program.

The objective has been only partially met.

Objective 9: Employers are substantively used as instructional agents as well as planners and evaluators.

In order to determine the degree to which this was accomplished, the Learning Activity Sheets of the students were examined. Additionally, the

TABLE III

RESULTS FROM EMPLOYER QUESTIONNAIRE

1. Did the EBCE staff provide you with the necessary information to help you direct students' activities at your site?

   Yes 30 No 2 Sometimes 1

2. Did students show you their activity sheet?

   Yes 21 No 7 Sometimes 5

3. Did EBCE staff explain the reason for the particular placement?

   Yes 28 No 2 Sometimes 2 No Answer 1

4. Did EBCE staff provide you with feedback on student's progress?

   Yes 15 No 5 Sometimes 12 No Answer 1

5. Which of the following supportive services do you (or others at your site) provide for the Experience-Based Career Education (EBCE) program students? (Check each appropriate category.)

	Frequently	Occasionally	Seldom	Never	No Answer
Do you talk about job opportunities?	14	16	2	0	1
Do you talk about the students' personal problems?	6	10	9	7	1
Do you talk about activities at your site?	23	7	0	0	3
Do you tutor in an academic area?	3	5	7	16	1
Do you evaluate individual students' assignments?	14	11	4	4	0
Do you assist students in non-job related assignments?	6	7	4	15	1

TABLE III (Continued)

	Frequently	Occasionally	Seldom	Never	No Answer
Do you supervise students to perform a specific job-related task at your site?	26	6	0	0	1
Do you help plan student assignments?	22	1	0	8	1

6. How do students spend their time at your site? (Check each appropriate category?

	Frequently	Occasionally	Seldom	Never	No Answer
Observing site activities	21	8	2	2	0
Researching from site materials	10	10	5	5	3
Actively performing site activities	27	2	3	1	0
Talking with me	17	11	4	0	1
Talking with other site personnel	19	10	2	0	2
Individual study	6	6	10	7	4

7. Do you think the EBCE students have been interested in your site?

Yes 25 No 6 Don't know 2

8. Based on the EBCE students placed at your site, do you feel these students were interested in the concept of EBCE?

Yes 24 No 2 Don't know 5 No answer 1

9. How have employees at your site reacted to the EBCE students placed at your site?

Favorably 29 Unfavorably 0 Not sure 2 Depends on student 1
No answer 1

10. How has top level management reacted to the EBCE students placed here?

Favorably 30 Supportive 1 Unfavorably 1 No answer 1

TABLE III (Continued)

11. Do you think your company will continue working with the EBCE project during the next couple of years?

Yes 26 No 0 Don't know 6 No answer 1

12. Based on the students and staff you've met, how effective do you feel the program was?

Effective 24 Some 2 Ineffective 4 No answer 3

13. Do you feel the program functioned as you were led to believe when you were recruited as an employer site?

Yes 26 No 0 Don't know 6 No answer 1

14. How would you rate the students you had in their attitude toward work?

Very good 8 Good 17 Fair 6 Poor 1 Very poor 0
No answer 1

15. To what degree do you think the students you had on site understand what is required of them in locating and acquiring work?

A great deal 11 Some 13 A little 3 Not at all 2
Can't say 2 No answer 2

16. What do you feel the strengths of the EBCE program were?

Career exploration 13 Learn about life 6
On the job training 4 Interrelationships 2
No response 8
Other strengths indicated were: interest in youth, placement of interested students at site, orientation to business, individual guidance available, flexibility of program and ability to respond to employer needs.

17. What do you feel the weaknesses of the EBCE program were?

Low skill level of students 6 Attitude of some students very poor 2
Better orientation of site personnel and students needed 2
Should be better communication between center and job site 2
Students not geared to day-to-day run of mill activity 2
No response 8

Other weaknesses were: short duration of placement, should have better placement of student--aptitude for job should be considered, student and employer not having enough time to find out extent of interest, don't know what is expected of me by the school, student interest, some students too young, should create a desire in student to take advantage of the opportunity, more assertiveness training needed, time on site too long, should pay resource person, resources on site not used, not enough time to devote to individual, lack of student control and learning activities not related.

employers were asked in the Employer Questionnaire to indicate the degree to which they provided supportive services which would be expected in instructing, planning, and evaluating students.

On the Learning Activities, 875 learning activity sheets were analyzed by ERANDA staff and 101 of these utilized or designated the student to utilize the resource person in completing the assignment. This represents 12 percent of the Learning Activities which is far below the criterion of 50 percent as established in the evaluation design. While the Learning Activities are developed at the Center by the Learning Coordinator and all activities are to be coordinated in a single instructional system, a great deal of instruction occurs on site that may or may not relate to specific learning activities. Table III indicates that employers (resource persons) provided supportive services to varying degrees. Fourteen said they talked to students frequently about job opportunities and 16 others talked to them occesionally about such opportunities. Six talked about students' personal problems, but practically all talked about activities at the site with students. Only three said they tutored students frequently and five others said they tutored occasionally. Sixteen indicated that they never tutored in an academic area. Twenty-five indicated they evaluated individual students at least occasionally. More than a third assisted students in non-job related assignments, but all supervised students to perform a specific job related task at their site, at least occasionally. Twenty-two said they frequently helped plan student assignments, while 8 indicated that they never help plan student assignments. The objective was partially met.

Objective 10: Staff external resources (Parents, employers, etc.) are major participants in evaluation, student assessment, instructional planning, etc.

When the activity sheets were analyzed, only 6.6 percent included the parents in assignments, but an additional 12 percent included others, particularly including employers, resource persons and others. During the course of the year, there were monthly Advisory Council meetings. Parents attending these sessions provided input into planning activities for students. The criterion for parents' usage in instruction and evaluation of student activities was 25 percent or higher and for other people (people other than employers, resource persons, learning coordinators or parents) the criterion was 10 percent.

Since the learning activities covered four major subject matter areas, this criterion is probably unrealistic. Mathematics learning activities, which were primarily drill and practice, would not utilize an external resource. The criterion should be established only for the Career Exploration Learning Activities. If this were the case, the criterion would have been met.

The resource persons on the employer questionnaire indicated that 75.8 percent engaged in evaluating individual student assignments at the site. While this does not include learning activities, it is indicative of the kind of external staff resources intended by the objective. Two thirds of the resource persons also helped plan student assignments on site. The criterion for objective 10 was partially achieved, however, if it applied only to Career Exploration activities, it was met.

Learner Outcomes. The learner outcomes or product objectives are those things which the program hopes to accomplish with the students during the course of the year or semester. Under controlled conditions, which very seldom exist in the behavioral and social sciences, one can be reasonably certain that the treatment did, in fact, cause certain things to occur. True control groups, however, are difficult to obtain. The design for the first year of the Harrisburg

EBCE program called for a control group. However, problems developed last year in obtaining a control group and it was decided that a comparison group would only be used to compare EBCE students with students with similar scores on the Stanford Test of Basic Academic Skills. Other objectives were revised and were criterion referenced.

Objective 1: EBCE students will acquire basic academic skills which are at least equal to the comparison group.

The Harrisburg City School District gives the Stanford Test of Academic Skills each year. The district is satisfied that this instrument adequately assesses the basic skills taught in the system. Data on the Stanford was obtained from the May, 1977, testing. A comparison group for this year's tenth and eleventh graders was selected utilizing reading scores, grade level and sex as the characteristics for selection. Seniors had no comparison group because they are not required by the district to complete the Stanford. Data was available on 12 sophomore EBCE students and 12 sophomore comparison group students and 13 junior EBCE students and 13 junior comparison group students. Additionally, all students were required to take the Basic Skills Inventory developed by AEL both pre and post. This data was anlayzed to determine whether or not there was a singificant improvement from pre to post on Reading and Mathematics.

As Tables IV and V indicate, there were no significant differences between the EBCE students and the comparison students on each of the subtests of the Stanford at both grade levels except for reading at the tenth grade level. The comparison group did significantly better than the EBCE students in this one instance. The figures are standard scores which were used in the analysis. The tenth graders in the EBCE program showed a slight mean gain on all subtests, while the juniors showed slight mean decreases in Reading and English and a

TABLE IV

SUMMARY OF ANALYSES OF COVARIANCE COMPARING EBCE SOPHOMORES TO COMPARISON SOPHOMORES ON READING, ENGLISH AND MATHEMATICS SUBTESTS OF STANFORD TEST OF ACADEMIC SKILLS

Reading

Summary of Analysis of Covariance

Variation	D/F	Sum of Sq.	Mean Sq.	F-Ratio
Between	1	530.519	530.519	8.62449
Within	19	1168.75	61.5131	
Total	20	1699.27	84.9634	

Group	N	Pre-Mean	Post-Mean	Adj. Post Mean	Finney T-Test	Probability
EBCE Sophomores	11	177.82	181.82	181.86	2.94	.01
Comparison Sophomores	11	177.91	191.73	191.68		

English

Summary of Analysis of Covariance

Variation	D/F	Sum of Sq.	Mean Sq.	F-Ratio
Between	1	35.6655	35.6655	.180029
Within	21	4160.30	198.110	
Total	22	4195.97	190.726	

Group	N	Pre-Mean	Post-Mean	Adj. Post Mean	Finney T-Test	Probability
EBCE Sophomores	12	186.25	195.83	197.10	.42	NS
Comparison Sophomores	12	188.17	195.92	194.66		

Mathematics

Summary of Analysis of Covariance

Variation	D/F	Sum of Sq.	Mean Sq.	F-Ratio
Between	1	78.5474	78.5474	.777274
Within	21	2122.16	101.055	
Total	22	2200.70	100.032	

Group	N	Pre-Mean	Post-Mean	Adj. Post Mean	Finney T-Test	Probability
EBCE Sophomores	12	179.17	182.17	183.99	.88	NS
Comparison Sophomores	12	184.0	182.17	180.34		

TABLE V

SUMMARY OF ANALYSES OF COVARIANCE COMPARING EBCE JUNIORS TO COMPARISON JUNIORS ON READING, ENGLISH AND MATHEMATICS SUBTESTS OF STANFORD TEST OF ACADEMIC SKILLS

Reading

Summary of Analysis of Covariance

Variation	D/F	Sum of Sq.	Mean Sq.	F-Ratio
Between	1	53.6238	53.6238	.334673
Within	23	3685.24	160.228	
Total	24	3738.86	155.786	

Group	N	Pre-Mean	Post-Mean	Adj. Post Mean	Finney T-test	Probability
EBCE Juniors	13	202.62	202.54	202.82	.58	NS
Comparison Juniors	13	203.15	200.23	199.95		

English

Summary of Analysis of Covariance

Variation	D/F	Sum of Sq.	Mean Sq.	F-Ratio
Between	1	236.725	236.725	.465455
Within	23	11697.5	508.589	
Total	24	11934.3	497.261	

Group	N	Pre-Mean	Post-Mean	Adj. Post Mean	Finney T-test	Probability
EBCE Juniors	13	211.31	210.85	209.35	.68	NS
Comparison Juniors	13	206.54	213.92	215.42		

Mathematics

Summary of Analysis of Covariance

Variation	D/F	Sum of Sq.	Mean Sq.	F-Ratio
Between	1	5.38363	5.38363	2.55233E-02
Within	23	4851.39	210.930	
Total	24	4856.77	202.365	

Group	N	Pre-Mean	Post-Mean	Adj. Post Mean	Finney T-Test	Probability
EBCE Juniors	13	197.46	200.31	198.62	.16	NS
Comparison Juniors	13	193.08	197.85	199.54		

slight increase in Mathematics. This phenomena seems to occur in most urban school districts in Pennsylvania. Title I data statewide shows decreases for juniors in most urban schools.

All students entering the EBCE program were given the Basic Skills Inventory as a diagnostic. In an effort to obtain additional data to assess the first objective, the Basic Skills Inventory was readministered to the EBCE students as a posttest. Students took the BSI in the morning prior to a club picnic in June and though testing conditions were normal, the students may not have had their minds fully on the task at hand.

The BSI is used in all AEL programs and data on its validity and reliability is available from AEL. Utilizing the Kuder-Richardson Formula 20 for reliability, the reliability of the BSI ranged from .79 on the Reading posttest to 1.00 on the Mathematics pre and posttests.

Table VI shows that there were no significant gains on either the Reading or the Mathematics tests on the BSI. The Reading subtest had a maximum of 25 points, and though the means were high (all over 19.0) there was enough room for improvement to be obtained. On the Mathematics test the maximum score was 100 and there was more than ample room for improvement.

The lack of significant improvement in the basic skills area has to be of some concern to the program, but in light of the fact that the EBCE students did as well as the comparison students on the Stanford Test of Academic Skills, the program is achieving results similar to the high school. The criterion for objective one has been met.

Objective 2: EBCE students will develop appropriate work habits in school.

Work habits were defined in the revised objective to mean work habits shown by students in terms of attendance and study habits.

TABLE VI

SUMMARY OF CORRELATED T-TESTS TO DETERMINE SIGNIFICANT IMPROVEMENT IN READING AND MATHEMATICS ON THE BASIC SKILLS INVENTORY

Reading

Group	N	Pre-Mean	Post-Mean	Gain	t	Probability
All EBCE Students	41	19.66	19.61	- .05	-.11	NS
12th Grade	14	20.86	20.64	- .24	-.26	NS
11th Grade	16	19.06	19.75	.69	.97	NS
10th Grade	11	19.0	18.09	-.91	-1.71	NS

Mathematics

Group	N	Pre-Mean	Post-Mean	Gain	t	Probability
All EBCE Students	41	64.02	64.78	.76	.43	NS
12th Grade	14	65.29	67.86	.57	.83	NS
11th Grade	16	65.44	65.63	.19	.08	NS
10th Grade	11	60.36	59.64	-.72	-.17	NS

TABLE VII

COMPARATIVE ATTENDANCE FIGURES FOR
HARRISBURG EBCE STUDENTS FOR
1976-77 and 1977-78

Student	Attendance 1976-77 (180 days) # of Absences	Proportion of Days Attended	Attendance 1977-1978 Days in Program	# of Absences	Proportion of Days Attended	Difference
A	27	85.	90	11	87.8	+ 2.8
B	18	90.	180	13.5	92.5	+ 2.5
C	42	76.7	180	22.	87.8	+ 11.1
D	33	81.7	90	2	97.8	+ 16.1
E	28	84.5	180	24.5	86.4	+ 1.9
F	10	94.5	153	5	96.7	+ 2.2
G	22	87.8	90	5	94.5	+ 6.7
H	8	95.6	180	10	94.5	- 1.1
I	0	100.0	175	0	100.0	0.0
J	7	96.2	180	4	97.8	+ 1.6
K	52	71.2	90	19.5	78.4	+ 7.2
L	9	95.	170	6	96.5	+ 1.5
M	13	92.8	165	5	97.0	+ 4.2
N	30	83.4	160	15	90.7	+ 7.3
O	27	85.	152	11	92.8	+ 7.8
P	20	88.9	110	12	89.1	+ .2
Q	26	85.6	82	1.5	98.2	+ 12.6
R	6	96.7	170	3	98.2	+ 1.5
S	23	87.3	150	12	92.0	+ 4.7
T	33	81.7	160	10.5	93.4	+ 11.7
U	35	80.6	168	14.	91.7	+ 11.1
V	17	90.6	170	6	96.5	+ 5.9
W	28	84.5	160	8	95.0	+ 10.5
X	30	83.4	170	7.5	95.6	+ 12.2
Y	37	79.5	90	3.5	96.2	+ 16.7
Z	16	91.2	168	5.5	96.7	+ 5.5
AA	41	77.3	160	16	90.0	+ 12.7
AB	10	94.5	170	5.5	96.8	+ 2.3
AC	26	85.6	152	12.5	91.8	+ 6.2
AD	19	89.5	168	3	98.2	+ 8.7
AE	36	80.0	123	12.5	89.8	+ 9.8
AF	27	85.0	160	0	100.0	+ 15.0
AG	39	78.3	140	9	93.6	+ 15.3
AH	20	88.9	170	9.5	94.4	+ 5.5
AI	38	78.9	160	7	95.6	+ 16.7
AJ	51	71.7	82	3	96.3	+ 24.6
AK	8	95.4	168	4	97.6	+ 2.2
AL	16	91.1	168	3	98.2	+ 7.1
AM	167	7.2	160	5.5	96.6	+ 89.4
AN	31	82.8	110	10	90.9	+ 8.1
AO	25	86.1	168	8	95.2	+ 9.1
AP	14	92.2	82	4	95.1	+ 2.9

Attendance figures for the 42 students in the program were examined. Table VII indicates that 40 students showed an improvement in school attendance over the 1976-77 school year. A Wilcoxson Matched-Pair Signed-Ranks test was run on the data and it was statistically significant beyond the .01 level of probability. The attendance figures are truly outstanding, however, since there were 27 students who were returned to John Harris during the course of the year, the figures are deceiving. Those returned were "problem" students and these students would probably not have such outstanding attendance records.

The Learning Coordinators were asked to rate the work habits of their students to determine whether or not they have shown significant improvement during the course of the year or the time in the program. Table VIII (Question 1) shows that there was a significant improvement from pre to post on the ratings by the Learning Coordinators of students' work habits. The mean for students upon entering the program was 2.93 on a 5-point scale and at the end of the year the mean was 3.69. Of the 42 students who were rated, 24 had shown improvement. Five were rated as "very good," or 5 on a 5-point scale both at the beginning and at the end. Thirteen students showed no improvement. The criterion for objective two has been met.

TABLE VIII

TEACHER RATINGS OF EBCE STUDENTS ON VARIOUS CHARACTERISTICS

1. Teacher ratings of work habits (school) as student entered program and at the end of the year (1 to 5 scale).

Pre-Mean	Post-Mean	t	Probability	No. Showing Improvement
2.93	3.69	6.51	.001	24 (5 VG at beginning)

TABLE VIII (Continued)

2. How would you rate the student's attitude toward work?

Very Good	14
Good	18
Fair	7
Poor	3
Very Poor	0

3. How would you rate the student's understanding of what is required in locating and acquiring work?

Very Good	8
Good	20
Fair	12
Poor	2
Very Poor	0

4. To what degree did the student show improvement in self-awareness?

None at all								A great deal
1	(2)	2	(7)	3	(9)	4	(20)	5 (4)

5. How would you rate the student's deportment?

Very Good	17
Good	16
Fair	7
Poor	1
Very Poor	1

6. Teacher ratings of social skills as student entered the program and at the end of the year.

Pre-Mean	Post-Mean	t	Probability	No. Showing Improvement
3.19	3.88	5.52	.001	21 (2 VG at beginning)

Objective 3: EBCE students will demonstrate positive attitudes toward work.

The attitude scale of the CMI was given to the students in October before the EBCE program commenced and again in late May. Forty-nine students were pretested, however, there were many who were returned to the high school. Data was available on only 28 of the 42 students who were in the program at the end of the year. Fourteen students entered the program in late January at the semester break who were posttested in May. A breakdown in communications between ERANDA and the EBCE staff resulted in these students not receiving the pretest. The data on the 14 were not utilized in this report. Table IX indicates that there was a significant improvement in attitude for the total group from pre to posttesting. The pre-mean was 34.04 and the post-mean was 36.18 for a gain of 2.14, which was significant at the .01 level of probability.

TABLE IX

RESULTS OF CORRELATED T-TEST ANALYSES

ON CMI ATTITUDE SCALE

Group	N	Pre-Mean	SD	Post-Mean	Sd	t	Probability
Total	28	34.04	4.72	36.18	4.62	2.85	.01
Males	11	34.45	3.45	34.0	3.87	- .34	NS
Females	17	33.76	5.47	37.59	4.61	5.95	.01
Tenth Grade	4	33.25	1.89	37.25	3.40	4.89	.01
Eleventh Grade	15	31.0	12.26	31.4	5.12	.12	NS
Twelfth Grade	9	36.78	4.44	36.44	3.94	- .25	NS

In order to determine whether or not there was a differential effect, the data was analyzed by sex and by grade. As Table IX indicates there was no significant

improvement for the males and a significant improvement for the females at the .01 level of probability. The males had a higher pretest mean than the females, but showed a slight loss, while the females showed a 3.83 mean gain. When the data was analyzed by classes, the tenth graders were the only ones to show significant improvement even though there were only four students who were both pre and posttested from the tenth grade.

As another measure or indicator of the student's attitude toward work, the Learning Coordinators were asked to rate each student's attitude. Table VIII (Question 2) shows that 32 of the 42 students were rated as "good" or "very good" by the Learning Coordinators and 7 were rated as "fair." Only 3 were rated as "poor." The criterion was that 80 percent of the students would be rated as 3 or better on a 5-point scale. This was exceeded.

Further corroboration of this was obtained from the resource persons. When they were asked to rate the students whom they had at their site on their attitude toward work, 25 were rated as "very good" or "good," 6 were "fair," and only 1 was rated as "poor" (see Table III, Question 14).

The criterion for objective three was met.

Objective 4: EBCE students will demonstrate a significant improvement in career decision-making skills, job hunting and job getting skills.

Part 4 of the CMI assesses decision-making skills of students. There was no significant improvement from pre to posttesting on Part 4 of the CMI (see Table X). There was a mean gain over all students of .23, but this was not close to being significant. When the data was analyzed by sex, the females showed a significant improvement, while the males showed a loss, though it was not significant.

Since job-hunting and job-getting skills involve knowledge about jobs, the CMI, Part 1 was analyzed. Table XI shows that EBCE students had a slight

TABLE X

RESULTS OF CORRELATED T-TEST ON

ANALYSES ON DECISION-MAKING SUBTEST OF CMI

Group	N	Pre-Mean	SD	Post-Mean	SD	t	Probability
Total	28	14.70	2.31	14.93	2.89	.57	NS
Males	11	13.82	3.63	13.36	3.80	-.68	NS
Females	17	15.05	2.19	15.82	1.51	1.77	.05
Tenth Grade	4	13.0	1.83	14.5	1.29	5.19	.01
Eleventh Grade	15	15.27	2.81	15.47	3.44	.32	NS
Twelfth Grade	9	14.11	3.14	1.40	2.18	.21	NS

TABLE XI

RESULTS OF CORRELATED T-TEST ANALYSES ON

KNOWING ABOUT JOBS SUBTEST OF THE CMI

Group	N	Pre-Mean	SD	Post-Mean	SD	t	Probability
Total	28	15.52	2.15	15.59	2.90	.13	NS
Males	11	15.09	1.81	14.73	3.50	-.34	NS
Females	17	15.88	2.72	16.29	2.31	.68	NS
Tenth Grade	4	15.50	2.65	16.25	3.1	1.0	NS
Eleventh Grade	15	15.80	2.11	15.53	2.83	-.35	NS
Twelfth Grade	9	15.22	2.17	15.67	3.20	.38	NS

mean gain in knowledge about jobs, but it was not close to significant. All other analyses were also not significant.

The Learning Coordinators were asked to rate the student's understanding of what is required in locating and acquiring work as an additional means of assessing this objective. Only 2 were rated as poor by the Learning Coordinators (Table VIII, Question 3). Twelve were rated as "fair" and 28 were "good" or "very good." The ratings of the females were higher than the males, corroborating the results obtained with the CMI.

The Resource Persons were also asked in the Employer Questionnaire to what degree they thought the students understood what is required of them in locating and acquiring work (Table III, Question 15). Only 2 said that students they had knew nothing at all about locating and acquiring work.

The objective was partially achieved.

Objective 5: EBCE students will demonstrate a high level of self-awareness and career awareness.

In order to assess this objective, Part 2--Knowing About Yourself and Part 5--Problem Solving of the CMI were used to determine whether there was significant improvement. Tables XII and XIII give the results of the analysis. On the Knowing Yourself subtest there was no improvement from pre to post in any of the analyses. On the Problem Solving subtest, however, there was a significant improvement. The analysis of all EBCE students was significant and the analysis of male and female data also showed significant improvement. Among the grades, only the twelfth graders did not show statistically significant improvement, though they experienced a mean gain of 1.56.

In the student interview, students were asked several questions which dealt with their self-awareness and career awareness. Students were asked if the program helped them to develop an understanding of their interests and abilities and 40 said "yes" (Table II, Question 19). Students were asked what

TABLE XII

RESULTS OF CORRELATED T-TEST ANALYSES ON

KNOWING YOURSELF SUBTEST OF THE CMI

Group	N	Pre-Mean	SD	Post-Mean	SD	t	Probability
Total	28	14.75	3.12	14.68	2.87	-.14	NS
Males	11	14.64	3.11	13.45	3.62	-1.61	NS
Females	17	14.82	3.22	15.47	2.00	1.08	NS
Tenth Grade	4	14.0	3.67	13.0	4.24	- .74	NS
Eleventh Grade	15	14.53	3.40	14.8	2.65	.40	NS
Twelfth Grade	9	15.44	2.74	15.22	2.64	-.24	NS

TABLE XIII

RESULTS OF CORREALTED T-TEST ANALYSES ON

PROBLEM-SOLVING SUBTEST OF THE CMI

Group	N	Pre-Mean	SD	Post-Mean	SD	t	Probability
Total	28	9.57	2.49	10.82	2.51	2.55	.01
Males	11	8.82	1.83	10.0	2.61	2.35	.01
Females	17	10.06	2.77	11.35	2.37	1.72	.10
Tenth Grade	4	9.5	2.38	10.5	1.73	2.45	.05
Eleventh Grade	15	9.67	2.87	10.8	2.46	1.88	.05
Twelfth Grade	9	9.44	2.07	11.0	3.08	1.31	NS

their future plans were and then were asked how they would go about securing training for the skills needed in that particular occupation (Question 23). Thirty-nine students gave an appropriate response indicating that they were aware of the necessary kind of education or training needed for the occupation in which they expressed interest.

As a final indicator, the Learning Coordinators were asked to rate their students on the degree to which the student showed improvement in self-awareness. Table VIII (Question 4) shows that 33 of the 42 students were rated as 3 or better on a 5-point scale. The criterion was an average rating of 3 on a 5-point scale and the average rating was 3.4.

The results of the CMI, student interview responses and Learning Coordinator ratings indicate that the objective was partially achieved.

Objective 6: EBCE students will demonstrate an understanding of the necessity of developing marketable skills.

During the student interview, each student was asked how important it was to develop marketable skills. Table II indicated that 32 thought it was very important, 7 thought it was important, while 3 were neutral. Marketable skills had to be defined for many of the students, but when this was accomplished 39 of the students demonstrated an understanding of the necessity for developing marketable skills. The criterion was that 80 percent would demonstrate an understanding, therefore, the objective was met.

Objective 7: EBCE students will show an understanding of the job qualifications and work tasks for various occupations.

In order to assess this objective, the students were asked in the interview session to name the job sites that they attended and then to give the occupation they were interested in at the job site. They were then asked what kinds of tasks are required in this occupation and finally what the qualifications for the job were. All students could identify at least some of the tasks.

performed by the particular occupation mentioned. However, on the qualifications for the occupation the results were somewhat mixed. Twenty-nine students knew most of the qualifications for the occupations that they were interested in at the job site, while 12 knew the qualifications for some of the occupations that they experienced, but did not know the qualifications for all of them. One individual did not know the qualifications for any of the occupations. The criterion for this objective was that 100 percent of the students would be capable of relating job tasks and qualifications for various occupations. The objective was not met.

Objective 8: EBCE students will be more likely to explore and select career areas which are different from those normally expected for their sex-role.

A concerted effort was made by the counselor and Learning Coordinators to develop a program in sex-role stereotyping and sex bias. Several sessions were held during the course of the year. They were generally well planned. They were planned to maximize student involvement. In several cases after indicating that they weren't going to participate, students did so and very eagerly joined in. Additionally, Learning Coordinators emphasized the area of sex fairness with their students. Some students were given learning activities which were designed to accomplish the goals in this area.

In order to determine the extent of sex-role stereotyping and sex bias, several instruments were utilized. The first was an instrument developed by Patrick O'Neill at Acadia University in a study conducted with college students. First a group of students rank ordered a list of occupations in terms of status and they were asked to rate each job according to its masculinity. Eight jobs were selected on the basis of these results. These were cited consistently as either high or low status and either masculine or neuter in gender. Two jobs were high status/high masculine; two were low status/high masculine; two were high status/neuter gender; and two were low status/neuter gender. Descriptions

TABLE XIV

COMPARISON OF MALE AND FEMALE DESCRIPTIONS FOR ALL EBCE STUDENTS AND BY SEX

	1st Desc. Male		1st Desc. Female		2nd Desc. Male		2nd Desc. Female		3rd Desc. Male		3rd Desc. Female		4th Desc. Male		4th Desc. Female	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
High Status/High Masculine	2	3	1	3	6	5	5	6	4	5	6	9	6	10	10	10
Low Status/High Masculine	7	10	7	7	8	4	4	4	9	7	12	8	7	8	4	4
High Status/Neuter Gender	8	13	3	8	10	7	6	6	8	11	8	7	3	5	5	7
Low Status/Neuter Gender	11	8	17	16	11	8	13	11	7	5	11	7	9	4	7	7
Male vs Female overall	χ^2 = 1.83, NS		χ^2 =2.75 NS		χ^2=.39,NS		χ^2=.24,NS		χ^2=1.69,NS		χ^2=1.84,NS		χ^2=3.42,NS		χ^2=.26,NS	
Male vs Male comparison	χ^2 = 2.27, NS				χ^2=1.84,NS				χ^2=.48,NS				χ^2=2.55,NS			
Female vs Female comparison	χ^2 = 4.39, NS				χ^2=.47,NS				χ^2=2.29,NS				χ^2=2.47,NS			

of eight stimuli persons were developed. The first four were given two female and two male names. The descriptions of the second four were the same as the first four except that those which were male in the first four were now female and female were now male. The descriptions of the stimuli persons were reviewed by the Project Director and the Assistant to the Superintendent. They made modifications in the descriptions, but agreed that the instrument had face validity. The eight descriptions were given to the students. Following each description was a list of the eight occupations whose order had been randomly selected. Students were asked to read the description of the person and then select the job or jobs for which they felt the person would be suited. Table XIV shows that there were no significant differences between the male and female descriptions for all four cases. When the data was analyzed by sex, there were also no significant differences.

Two additional instruments were utilized in assessing the sex-role stereotyping and sex bias among EBCE students. Using the semantic differential technique, students completed two instruments--one for the ideal adult male and one for the ideal adult female. Their instructions were "imagine the girls (boys) in your class as adults. Ideally, to what extent would you hope that, as women (men) they would be characterized by each of the following traits?" Tables XV, XVI and XVII give the results of the analysis on these instruments.

Since we were only trying to establish that there were or were not differences between the ideal adult male and female as rated by the students the scales were not reversed to indicate positive and negative polarity. The scales were scored from 1 to 7.

When all students were analyzed, 7 of the 21 scales were significantly different and on each of those it was a trait which dealt with the macho

TABLE XV

COMPARISON OF IDEAL ADULT MALE AND IDEAL ADULT FEMALE FOR EBCE STUDENTS

Scale	Mean of Male	Mean of Female	t	Probability
Not at all aggressive--very aggressive	4.0	5.13	2.69	.01
Very sneaky--very direct	4.41	4.91	1.09	NS
Very tactful--very blunt	3.52	4.03	1.48	NS
Shows emotions--hides emotions	2.41	3.38	2.07	.05
Does not use harsh language--uses harsh language	2.66	3.41	1.61	NS
Aware of the feelings of others--disregards feelings of others	2.19	2.28	.25	NS
Skilled in business--unskilled in business	2.48	2.48	.00	NS
Easily influenced--not easily influenced	4.03	4.78	1.79	NS
Quiet--talkative	4.00	4.53	1.37	NS
Doesn't need feeling of security--strong need for security	4.27	4.25	.05	NS
Logical--illogical	2.79	2.78	.01	NS
Excited in a crisis--not excited in a crisis	3.91	4.93	2.44	.05
Feelings easily hurt--feelings not easily hurt	3.78	5.06	3.22	.01
Cries easily--never cries	3.38	5.07	4.57	.001
Gentle--harsh	2.30	2.88	1.46	NS
Acts as a leader--acts as a follower	3.34	2.79	1.71	NS
Neat in habits--untidy in habits	1.97	2.84	2.70	.01
Expresses tender feelings--keeps tender feelings inside	2.06	2.59	1.33	NS
Religious--doesn't need religion	2.55	3.41	2.48	.05
Thinks men are superior to women--thinks women are superior to men	4.25	3.67	1.77	NS
Able to separate feelings from ideas--not able to separate feelings from ideas	2.67	3.10	1.33	NS

TABLE XVI

COMPARISON OF IDEAL ADULT MALE AND IDEAL ADULT FEMALE FOR EBCE MALE STUDENTS

Scale	Mean for Ideal Adult Female	Mean for Ideal Adult Male	t	Probebility
Not at all aggressive--very aggressive	3.8	5.69	3.15	.01
Very sneaky--very direct	3.53	5.0	2.46	.01
Very tactful--very blunt	3.69	4.5	1.79	.05
Shows emotions--hides emotions	2.07	3.71	2.61	.01
Does not use harsh language--uses harsh language	2.2	3.21	1.64	NS
Aware of the feelings of others--disregards feelings of others	1.93	2.07	.37	NS
Skilled in business--unskilled in business	2.26	2.07	.50	NS
Easily influenced--not easily influenced	3.53	4.64	2.09	.05
Quiet--talkative	4.27	4.29	.03	NS
Doesn't need feeling of security--strong need for security	4.69	4.36	.55	NS
Logical--illogical	2.75	2.78	.08	NS
Excited in a crisis--not excited in a crisis	3.4	5.0	3.31	.01
Feelings easily hurt--feelings not easily hurt	3.47	5.14	3.09	.01
Cries easily--never cries	3.4	5.57	4.99	.001
Gentle--harsh	1.93	3.07	2.35	.05
Acts as a leader--acts as a follower	3.27	2.43	1.80	.05
Neat in habits--untidy in habits	1.87	2.86	2.21	.05
Expresses tender feelings--keeps tender feelings inside	2.0	2.64	1.46	NS
Religious--doesn't need religion	2.21	3.07	1.80	.05
Thinks men are superior to women--thinks women are superior to men	3.67	3.31	.91	NS
Able to separate feelings from ideas--not able to separate feelings from ideas	2.47	2.29	.56	NS

TABLE XVII

COMPARISON OF IDEAL ADULT MALE AND IDEAL ADULT FEMALE FOR EBCE FEMALE STUDENTS

Scale	Mean for Ideal Adult Female	Mean for Ideal Adult Male	t	Probability
Not at all aggressive--very aggressive	4.19	4.74	.96	NS
Very sneaky--very direct	5.17	4.83	.53	NS
Very tactful--very blunt	3.3[illegible]	3.65	.57	NS
Shows emotions--hides emotions	2.71	3.11	.60	NS
Does not use harsh language--uses harsh language	3.06	3.56	.73	NS
Aware of the feelings of others--disregards feelings of others	2.17	2.44	.46	NS
Skilled in business--unskilled in business	2.69	2.82	.23	NS
Easily influenced--not easily influenced	4.47	4.89	.67	NS
Quiet--talkative	3.75	4.72	1.81	.05
Doesn't need feeling of security--strong need for security	3.88	4.17	.44	NS
Logical--illogical	2.83	2.53	.52	NS
Excited in a crisis--not excited in a crisis	4.35	4.88	.80	NS
Feelings easily hurt--feelings not easily hurt	4.06	5.0	1.62	NS
Cries easily--never cries	3.35	4.78	2.59	.01
Gentle--harsh	2.75	2.72	.04	NS
Acts as a leader--acts as a follower	3.41	3.06	.76	NS
Neat in habits--untidy in habits	2.06	2.83	1.62	NS
Expresses tender feelings--keeps tender feelings inside	2.12	2.56	.69	NS
Religious--doesn't need religion	2.87	3.67	1.65	NS
Thinks men are superior to women--thinks women are superior to men	4.76	3.94	1.75	.05
Able to separate feelings from ideas--not able to separate feelings from ideas	2.83	3.76	1.95	.05

image of the male. The ideal male was more aggressive, hid emotions, is not excited in a crisis, feelings are not easily hurt, never cries, is untidy in habits and doesn't need religion as compared to the ideal adult female.

When the data was analyzed by sex it can be seen that the male students rated the ideal adult male and ideal adult female differently. There was a significant difference on 12 of the 21 scales. Each of the 7 described above were again significant for male students as well as 5 others. Male students saw the ideal adult male as more direct, very blunt, not easily influenced, harsh and acts as a leader as compared to the ideal adult female. The female students on the other hand saw less differences between the ideal adult male and female. There were four scales upon which they felt the ideal adult male and female would differ. The female students felt the ideal adult female was quiet, cries easily, thinks women are superior to men and is more able to separate feelings from ideas than is the ideal adult male.

The last instrument was an attitude scale using the Likert technique. Eleven statements were given to the students to which they would indicate the extent to which they agreed or disagreed with the statement. When the males were compared to the females there was a significant difference on 4 of the eleven scales. On this scale the items were reversed to show polarity. On each of the four scales the females had a more positive attitude. The females disagreed that men are more creative than women, while the males were between neutral and slight disagreement. The males agreed that there were many jobs in which men should be given preference over women in being hired or promoted, where the females were neutral to slight disagreement on this statement. The females agreed that women should have the same opportunity as men to become apprentices in the trades whereas the males agreed, but not as strongly as the females. Finally, the females disagreed that men should get more pay than women even when they do the same job, while the males disagreed, but not as strongly as the females.

TABLE XVIII

COMPARISON OF MALE AND FEMALE

RESPONSES TO ATTITUDE SCALE

Question	Mean of Male	Mean of Female	t	Probability
1. Men should have the option of having more time to spend raising their children.	3.87	4.11	-.61	NS
2. Fathers should do all the repair jobs around the house.	3.07	3.16	-.22	NS
3. Women should seek jobs which allow them the flexibility of time off to have children and raise a family.	4.07	4.11	-.16	NS
4. When both parents are working, the father should help with the household chores.	4.26	4.52	-.88	NS
5. It is a mother's job to cook and clean the house, even if she works all day at a paying job.	3.83	3.85	-.04	NS
6. Men are more creative than women.	3.47	4.26	-2.32	.05
7. The father should earn more money than the mother if both parents are working.	3.73	3.77	-.11	NS
8. Men shouldn't mind working for women bosses.	4.28	4.38	-.35	NS
9. There are many jobs in which men should be given preference over women in being hired or promoted.	2.60	3.53	-2.27	.05
10. Women should have the same opportunity as men to become apprentices in the trades.	4.13	4.74	-2.37	.05
11. Men should get more pay than women even when they do the same job.	3.93	4.56	-1.89	.05

An attempt was made to encourage students to accept non-traditional job-site placements, but the Experience Site Analyst and the Learning Coordinators were not successful. One female student did take an assignment which was typically male and she related that it was a very enlightening experience.

During the student interview students were asked if they thought sex should be a factor in obtaining a job or in being promoted and only 1 person said "yes" while 36 said "no," 3 said "don't know," and 2 more said "it depends." (Table II). Students understood problems which could be encountered when a man takes a position which was formerly considered a woman's job or vice versa.

The objective was partially met. The girls seem to have accepted the sex-role stereotyping and sex bias sessions, while the males show some evidence of acceptance but not to the same degree as the females.

Objective 9: Parents and the community will accept the EBCE concept as a valid alternative to the traditional educational process.

Interviews were conducted at the Keen Learning Center with four parents of students in the EBCE program. Additionally, a telephone survey of the parents was conducted. Parents were informed by letter that ERANDA would be calling between the hours of 3:30 and 8:00 p.m. on May 31. Of the 39 parents available (two had two students in the program and one student was living by herself and gave no parent's address), 33 were interviewed.

Table XIX shows that 24 parents indicated they were informed about what the EBCE program was before their son or daughter entered the program. All 9 who said they were not officially informed said that their son or daughter had explained the program to them. Literature was mailed to parents and a meeting for all parents was held prior to the implementation of the program with students. All should have had the opportunity to be amply informed and it is

surprising that those 9 said that they weren't informed. Thirty-one of the parents said they had been informed about how well their son or daughter was doing in the program. Most indicated that they received report cards and progress sheets while others indicated they received telephone reports. Meetings were held monthly from October through May. Notices were sent to parents and when asked how often were you invited to attend a meeting or how often were you asked to come to the Learning Center, 20 parents said 3 or more times. Since some students came into the program in January there were some who were uncertain (3) and 9 indicated they had been invited to two meetings. Attendance by the parents at monthly meetings was not good. Some parents indicated that they were invited but couldn't attend any and they gave varying reasons for not attending any of the meetings. Several of those who did attend meetings indicated they were members of the Advisory Committee.

When parents were asked how often they had contact with a member of the EBCE staff, 23 said 3 or more, and 4 said none at all. These 4 indicated that they received report cards and knew who the teacher (Learning Coordinator) was, but that they had no other contact with the teacher either by telephone or letter. These same 4 indicated that they could not respond to the question on satisfaction with the EBCE staff, while the remaining 29 parents said they were satisfied with the EBCE staff.

Thirty-one of the 33 parents said that their son or daughter talked with them about his or her experience in the EBCE program. When asked whether he or she was generally pleased with the job sites, all 33 said that they were. There were three parents who indicated that they thought a wider variety of sites should be available. When the parent was asked if he or she was satisfied with the types of experiences his or her son or daughter received, all 33 said "yes."

Twenty-one parents thought their son or daughter liked the EBCE program compared to John Harris, three said it was about the same and three said it was worse. Five parents indicated that they didn't know whether their son or daughter liked it better or worse than Harris. Parental perceptions were fairly accurate. The student interviews had returned similar results (see Table I). It was apparent during the interviews that in several homes there really wasn't very much discussion between students and parents. However, there was much more discussion between parents and students than in last year's group. Parents were well informed and more verbal than last year's group. Part of this may be due to the fact that the program was in operation for a full year.

When parents were asked the degree to which the EBCE program helped their son/daughter to develop social skills, 23 said "very much," 6 said "some," 3 were uncertain and 1 said there was no difference. This is an outcome which is expected to result from contact with adults at the work sites and it appears that the program is having an impact. The responses were also favorable to the question was their son or daughter aided in forming career plans. Seventeen parents said the program helped a lot, while 8 said a little, six said none at all, primarily because the student already had his/her mind made up and the program did not change it and two were undecided. In view of the fact that there were sophomores included in the program this year, this response was excellent.

Parents of 30 students indicated that they liked the idea of EBCE a lot, one said a little and only two said they didn't like it at all. Since the program could hardly please everyone, this was also an excellent response.

Finally, 24 parents said they have seen changes in their son or daughter as a result of the EBCE program, while eight said they didn't see any change and one was uncertain. When asked what kinds of changes they saw, 13 parents

TABLE XIX

PARENT RESPONSES TO INTERVIEW SCHEDULE

1. Were you informed about what the EBCE program was before your son/daughter entered the program?

   Yes 24 No 9

2. Since he/she has been in the program have you been told how well your son or daughter is doing in the program?

   Yes 31 No 2

3. How often were you invited to attend a meeting or to come in to the EBCE Learning Center?

   None 0 One 1 Two 9 Three or more 20 Uncertain 3

4. How often have you had contact with a member of the EBCE staff?

   None 4 One 2 Two 4 Three or more 23

5. Are you satisfied with the EBCE staff?

   Yes 29 No 0 Couldn't respond 4

6. Did your son/daughter talk with you about his/her experience in the EBCE program?

   Yes 31 No 2

7. Was he/she generally pleased with the job site?

   Yes 33 No 0

8. Were you satisfied with the types of experiences your son/daughter received?

   Yes 33 No 0

9. How do you think your son/daughter liked this EBCE program compared to John Harris?

   Better 21 Same 3 Worse 3 Uncertain 5

10. To what degree has the EBCE helped your son/daughter to develop social skills?

    Very much 23 Some 6 A little 0 No difference 1
    Uncertain 3

TABLE XIX

(Continued)

11. What effect, if any, has the EBCE program had in helping your son/daughter form career plans?

A lot 17 A little 8 None at all 6 Undecided 2

12. How do you like the idea of EBCE?

A lot 30 A little 1 Not at all 2

13. Have you seen any changes in your son/daughter as a result of the EBCE program?

Yes 24 No 8 Uncertain 1

If yes, what kind of changes?

More interest in school 13

More responsibility 3

More mature 5

Happier 4

---

gave responses that indicated there was more interest in school, five indicated that their son or daughter had shown growth in maturity, four said they were happier and three indicated that they were showing more responsibility around the house.

Two problem areas which were volunteered by parents were the problem of meeting physical education requirements in which activities usually cost money and the second area was that students were spending too much time at the Center between job sites. This information was given to the Project Director and he feels both will be alleviated during the third year.

When the employers were asked how the employees at the site reacted to EBCE students being placed at their site, none made an unfavorable comment

(see Table III). When they were asked how top level management reacted to EBCE students placed at their site, only 1 had an unfavorable comment. When they were asked whether they thought their company would continue working with the EBCE program during the next couple of years, 26 said "yes," 6 said "don't know" and one person did not answer this question. When they were asked to assess the effectiveness of the program, 24 thought it was effective, 3 did not respond, 2 said it was effective with some students and ineffective with others and 4 thought it was ineffective. The criterion was 80 percent favorable responses from the employer questionnaire which was achieved.

Objective 10: EBCE students will attend school regularly, complete course work successfully and show good deportment.

Attendance by the 42 students who remained in the program was excellent (See Table VII). A Wilcoxson Matched-Pairs Signed Ranks test indicated that attendance was significantly improved.

Of the 42 students in the program only one person failed and no other student received a failing grade in any of his courses. The criterion was that 80 percent or better would pass all courses, which was easily exceeded.

EBCE students were to demonstrate few discipline problems. There were only two major discipline cases during the year. In one case, the student was returned to the high school and in the second case, the student ran away from home in June after the disciplinary action had been taken. The student was to return with his parents, but he ran away the night before his meeting with the Project Director and the parents.

As a further indication of the student behavior, the Learning Coordinators were asked to rate their students on deportment. The Learning Coordinators rated 33 of their students as "very good" or "good," 7 as "fair" and only

2 were rated as "poor" or "very poor." The one rated "very poor" was the student who ran away. The criterion was an average rating of 4 on a 5-point scale. The average over 42 students was 4.1 which meets the criterion. The objective has been met.

Objective 11: EBCE students will become more aware of the importance of interpersonal skills in obtaining a job and pursuing a career.

Students were asked to rate the effectiveness of the EBCE program in improving their interpersonal and social skills. The ratings given in Table II show that the program was very effective. Ten rated the program "fair," 16 rated it "good" and 16 rated it "very good." The fact that the program was rated effective attests to the student's awareness of the importance of interpersonal skills and, therefore, the objective was met.

Objective 12: EBCE students will demonstrate improved social skills.

The Learning Coordinators were asked to rate their students' improvement in social skills from the time they entered the program until the end of the year. Table VIII indicated that the mean rating at the beginning was 3.19 and at the end of the program it was 3.88 which was a significant improvement. Twenty-one students showed improvement. Two were rated "very good" at the beginning and at the end and 19 showed no improvement.

Students gave the EBCE program a mean rating of 4.14 in effectiveness in improving their interpersonal and social skills (Table II, Question 17). This was above the 3.75 mean rating which was established as a criterion.

When parents were asked in their interview to what degree the EBCE program helped their son/daughter to develop social skills, 23 said "very much," 6 said "some," 1 said "no difference" and 3 were uncertain.

Objective 12 has been met.

Case studies. Two case studies are described which indicate the kind of impact which the EBCE program has had on students in the Harrisburg City School District.

Terry was in the program last year. Terry had been floundering in school and wasn't sure what he wanted to do. School was boring and all he wanted to do was graduate and get out. When the EBCE program was advertised last fall, Terry decided to give the EBCE a try. At the orientation session he was very bored and negative and requested to return to the high school. He was counseled by the Project Director and Counselor to stay. He did and was placed with the Public Defender's office in Harrisburg, The Resource Person in the Public Defender's office worked with Terry and his attitude changed dramatically. His work improved at the Learning Center and upon graduation he decided to go on to junior college. This year he maintained a "B" average and all reports were that he had adjusted well at college. Terry might never have attended junior college were it not for the program.

Paula was an introverted person who had been going through school doing better than acceptable work, but not really liking school. She didn't have a large number of friends and didn't like to be around a lot of people. Since entering the EBCE program in October she talks more openly with her peers and adults and, according to her mother, "she never wanted to participate--her junior year was a disaster--but she has really come out of her shell this year after being in the EBCE program." Paula did several independent studies in which she had to do library research and conduct interviews with professionals. She gained a great deal of confidence in carrying out those studies and became very comfortable in handling interviews with adults. Paula wasn't going to go to college, however, her resource person convinced her that she should give herself the opportunity just to determine whether or not she could do it. She is entering college this fall and plans to major in journalism.

Student Evaluation of EBCE. Students were asked during the student interview to rate the effectiveness of the EBCE program in meeting their needs in many areas. The data was reported in Table I (Question 17). Students rated the program as better than "good" in all the areas except learning basic academic skills where the rating of 3.71 was "fair" to "good." The ratings here may be attributed to a group of sophomores who entered the program in January. They had trouble adjusting to the situation. One student indicated that there wasn't enough repetition, while another indicated there just wasn't enough time to spend on academics. Out of the 42 students, however, 29 said the program was "good" or "very good" in effectiveness in learning basic academic skills. The other skill areas ranged from a mean of 4.05 on learning to make decisions and follow through on them and learning to think through and solve problems to 4.45 on learning to assume responsibility for yourself. Thirty-three of the 42 thought that the EBCE learning environment and program were better than the high school.

IV. Summary of Findings

Table XX gives a summary of the findings by objective. Only one structural objective and one learner outcome were not achieved. Objective 6 under the structural objectives and objective 7 under the learner outcomes were not met this year.

TABLE XX

DEGREE TO WHICH HARRISBURG EBCE PROGRAM

ACHIEVED OBJECTIVES FOR 1977-78

Objective	Criterion Partially Met	Criterion Met or Exceeded	Criterion Not Met
Structural Goals			
Objective 1: EBCE students are offered an integrated, inter-disciplinary curriculum.		X	

TABLE XX (Continued)

Objective	Criterion Partially Met	Criterion Met or Exceeded	Criterion Not Met
Structural Goals			
Objective 2: EBCE students who satisfactorily complete the program will be awarded the academic credit necessary for graduation from high school.		X	
Objective 3: Each EBCE student will have her/his total program coordinated and primarily guided by a single staff member.		X	
Objective 4: Each EBCE student will have access to a professional guidence and counseling staff member.		X	
Objective 5: Each EBCE student has a sequence of learning activities in a variety of modes, tailored to her/his individual goals, needs, abilities and interests.	X		
Objective 6: Each EBCE student will have access to a variety of employer sites commensurate with her/his career, academic and personal needs and interests.			X
Objective 7: All EBCE learning procedures, goals and resources are integrated into a single, coordinated instructional system.	X		
Objective 8: Effective learning will occur during a student's employer site activities through such mechanisms as preplanning, site analysis, pre-preparation, clear specification of objectives, supervision, etc.	X		
Objective 9: Employers are substantively used as instructional agents as well as planners and evaluators.	X		
Objective 10: Staff external resources (parents, employers, etc.) are major perticipants in evaluation, student assessment, instructional planning, etc.	X		

TABLE XX (Continued)

Objective	Criterion Partially Met	Criterion Met or Exceeded	Criterion Not Met
Learner Outcomes			
Objective 1: EBCE students will acquire basic academic skills which are at least equal to the comparison group.		X	
Objective 2: EBCE students will develop appropriate work habits in school.		X	
Objective 3: EBCE students will demonstrate positive attitudes toward work.		X	
Objective 4: EBCE students will demonstrate a significant improvement in career decision-making skills, job-hunting and job-getting skills.	X		
Objective 5: EBCE students will demonstrate a high level of self-awareness and career awareness.	X		
Objective 6: EBCE students will demonstrate an understanding of the necessity of developing marketable skills.		X	
Objective 7: EBCE students will show an understanding of the job qualifications and work tasks for various occupations.			X
Objective 8: EBCE students will be more likely to explore and select career areas which are different from those normally expected for their sex role.	X		
Objective 9: Parents and the community will accept the EBCE concept as a valid alternative to the traditional educational process.		X	
Objective 10: EBCE students will attend school regularly, complete course work successfully and show good deportment.		X	
Objective 11: EBCE students will become more aware of the importance of interpersonal skills in obtaining a job and pursuing a career.		X	
Objective 12: EBCE students will demonstrate improved social skills.		X	

V. Recommendations

1. Work should continue on the development of learning activities that are competency-based and logically sequenced. By the end of the third year, learning activities should be developed for each subject matter area.

2. Learning Coordinators should be provided additional in-service training in order to utilize the resources at the experience sites in the learning activities for students.

3. Contact and coordination at learning sites should be carried out between the Learning Coordinators and the Resource Persons directly.

4. Learning Coordinators should have a personal conference with the Resource Person the first time a student is placed on site and should use this time to explain the role of the Resource Person and make some suggestions when deemed necessary about how to enhance the student's learning activity.

5. Experience site guides need to be reviewed and revised to reflect the activities which student's actually perform at the sites.

6. More experience sites should be added to the program, particularly if transportation can be provided to those places not close to public transportation.

7. Short term volunteer type activities or other experiences should be developed to eliminate the time student spends at the Learning Center between site placements.

EXECUTIVE SUMMARY

The Harrisburg City School District's EBCE Program has just completed its second year of successful implementation. The alternative educational program has proved to be a success in meeting the needs of a segment of the student population. There have been many success stories for students who have been in the program over the last two years.

Evaluation data indicates that students in the EBCE program do as well as students with similar abilities in the high school. They show improved attitudes toward work and recognize the importance of developing marketable skills. Students learn about tasks which are performed by people in various occupations and they learn about the qualifications necessary for these occupations. Students have an opportunity to explore various occupations which enables them to make career choices.

Students generally show better work habits in school and their attendance improves. Side effects of the program are the self-awareness which students develop and improved interpersonal and social skills which students, parents and teachers indicate occur.

Reactions to the program by parents and employers are almost all favorable. Parents see changes in the children not only in school work but in their personal development. Resource Persons are favorable in their evaluations and think the program is effective in meeting its purposes.

The students themselves like the EBCE program and think that it is effective in meeting the goals of the program.

The only remaining areas of weakness are the development of sequenced learning activities which are competency-based in subject matter areas taken by students and better coordination of the learning activities with experience site activities.

The EBCE program, while not for every student, is a program which has proved successful. It is a viable alternative to the student who has some ability and/or talent who has been turned off or bored with school. Students remain in school, explore various careers, and learn about themselves and the world of work.

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